CONFIGURE ROUTERS to PORT FORWARD

Instruction Manual

English Version1.0

LOREX™

www.lorexcctv.com

Table of Contents

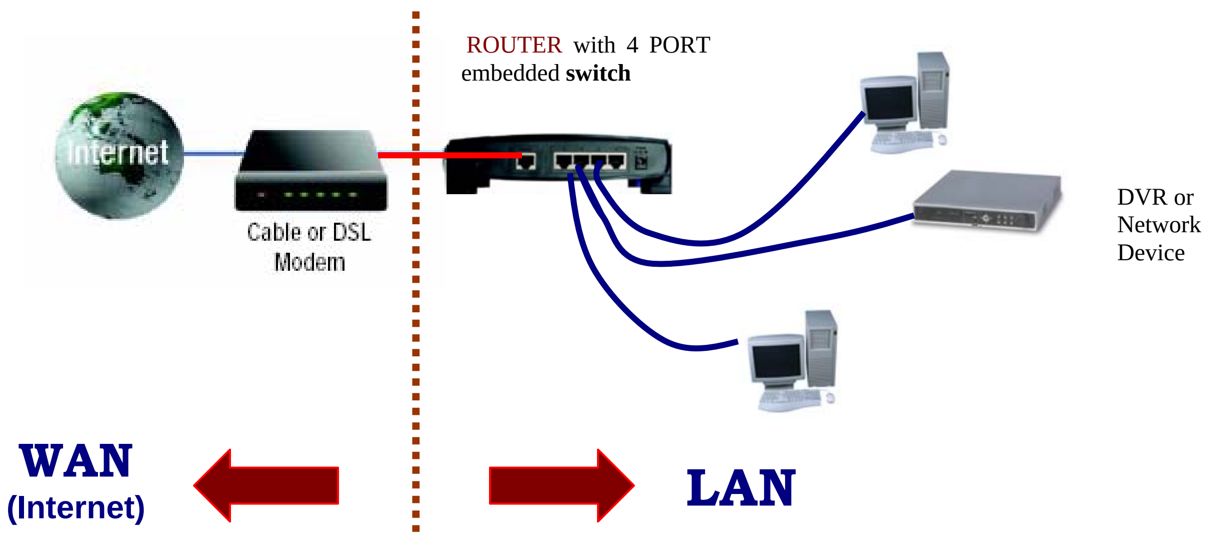
INTRODUCTION

The purpose of this manual is to help distributors, installers and customers in general to configure their routers for use with **a network device** such a digital video recorder, video server etc. Our goal is to provide enough information to configure the router and successfully connect to the cameras over the internet. This manual shows most common router models on the market. If your router it is not listed in the manual identify the other routers listed and see if there is a similar one. Let us know if your router is not listed so we may add it in future revisions.

THE ROUTER CONFIGURATION.

The router configuration screen is the last step in the process to view and access the cameras over the Internet (WAN). The connection and configuration will depend from the network topology, configuration and environment. Most digital video recorders and Network devices commonly are connected in a Local Area Network (LAN) and the Router is connected usually to a DSL modem or cable modem. The Router configuration is vital to connect properly to the internet and view the cameras from a remote location.

ROUTER with a 4 ports switch in a WAN / LAN environment.



Router : *A router is a device that forwards data packets along networks. A router is connected to at least two networks, commonly two LANs or WANs or a LAN and its ISP network. Routers are located at gateways, the places where two or more networks connect, and are the critical device that keeps data flowing between networks and keeps the networks connected to the Internet. When data is sent between locations on one network or from one network to a second network the data is always seen and directed to the correct location by the router. They accomplish this by using headers and forwarding tables to determine the best path for forwarding the data packets; and they use protocols such as ICMP to communicate with each other and configure the best route between any two hosts. The Internet itself is a global network connecting millions of computers and smaller networks — so you can see how crucial the role of a router is to our way of communicating and computing.*

PORT FOWARDING AND DMZ OPTIONS

Before you start working with your router is important to :

1. Assign a **static IP address** and select the ports to your **network device**(*) , (See **Appendix B** for more information).
2. Have ready your **router (gateway) IP address** to access the router menus (See **appendix A** for more information).
3. Have the **port list** ready according with your product needs to create the forwarding rules. (See page 7 with all products listed).

The information provided in this manual is to guide and help the customer create **forwarding rules or port forwarding for** specific ports on a router.

There are to ways to work with the router ports. The procedure may vary with the router manufacturer option screens. The two options are:

1 . PORT FORWARDING RULES **2. THE DMZ**

1. THE PORT FORWARDING RULES.

In order to allow users to access your **Network Device (*)** on the Internet (WAN) we need to create forwarding rules . That means we need to open ports on the Router and forward (Port forwarding) the data from a specific IP address . Once the Router has the ports opened the data will pass-through the Router . Every router internally works and interacts with two IP addresses. One is the internal IP address or gateway. The one works with your LAN and the other one is the external IP for the internet communications.

When a **Network Device** sends data to a remote router on the internet , the router receive the information and needs to know what to do with the data. The port forwarding feature what it does is to tells the router where to send the data with the computer or network device attached to the LAN.

(*)Network device*: Any IP addressable device or electronic equipment connected in a LAN such a Digital video recorder, video server or computer.*

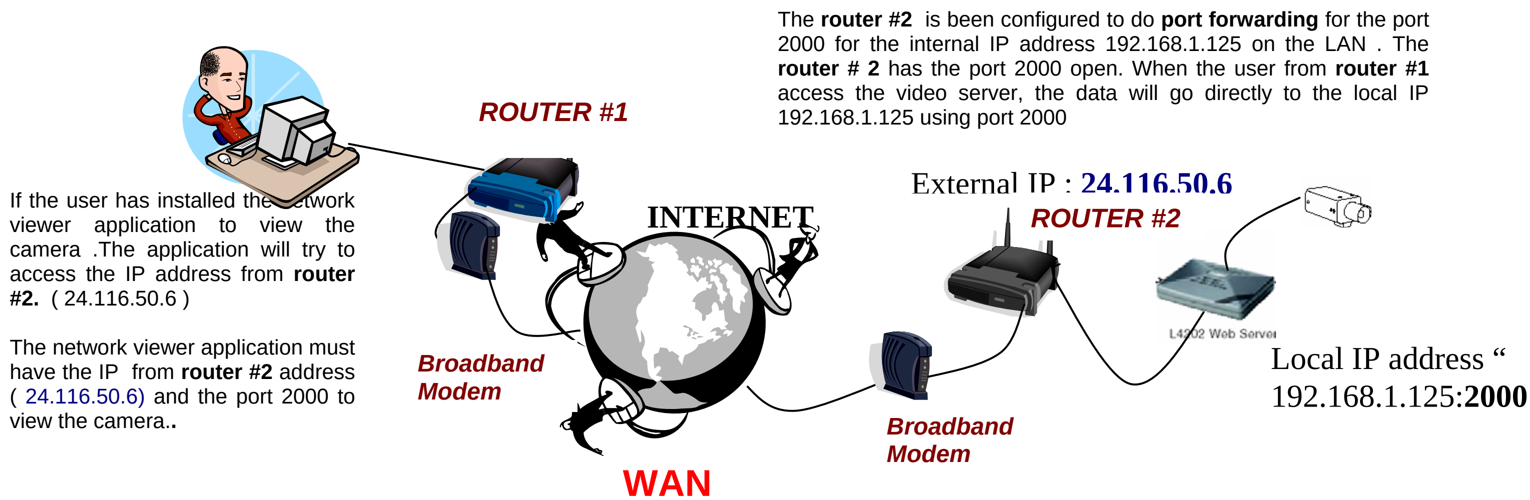
When you create and enable the ports on the router (**The term is referred as *forwarding rules***) , the router takes the data off the external **IP address: port** number (this is called a socket) and sends that data to an internal **IP address: port** number. The port forwarding rules are created per port.

Example using port 2000 : When the router receives the data from the ***external IP address***, the router works with the internal **NAT** (Network address translation) and communicates the information from the external IP to the internal IP address. The information from a distant **router** comes with a specific

forwarding rule and that rule contains information related to port 2000. That means the **internal IP address** (gateway) on your LAN will communicate only with the **network device on the LAN** configured to receive the data for port 2000. If you have one **network device** working with port 2000, only this device will be able to use port 2000. That means only a port number can be used for a program or network device. For example if you have a customer using 2 video servers connected on the same **LAN** , you have to give each one a different port to communicate on the same network or over the internet.

2. **THE DMZ feature**. (demilitarized zone)

This feature allows you to open all the ports at once in your router for your **Network device** IP address. The DMZ takes the IP address of the device on your network and forwards all ports. This is really a nice feature if you are having problems forwarding ports for some program or device. It can be a life saver if your router will not allow you to properly forward ports. The **Network Device** with the DMZ enabled is now wide open to internet traffic. If the network device attached to the router is a Digital video recorder or a Video server for example , the unit will not be able to catch a virus, or risk being hacked because these units are stand alone and designed with an embedded operating systems. On the other hand there is a risk if you are using a computer instead. If you are **using a computer** on your LAN it is better to **forward the ports** only and not use the **DMZ** option.



This figure shows an example of how a user access a video server/camera from a remote location using the IP from Router #2 and port 2000 on a a PC

For a more detailed explanation of the port forwarding procedures visit :
http://www.portforward.com/help/portforwarding.htm

LIST OF PORTS FOR LOREX NETWORK DEVICES

FAMILY	MODELS	PORTS	COMMENTS
IPSC	**IPSC2230 Day Night Camera**	TCP port 80 UDP Port 9001	Default Port : 80
IPSC	**IPSC2206 PAN/TILT DIGITAL ZOOM NETWORK CAMERA**	TCP port 80 UDP Port 9001	Default Port : 80
Video server	**L4202**	Any	**Default port is 80.** Only one port is needed. Suggested alternated port : 2000
DVM Software		5600-5700	**Default ports** : 5600 and 5700 **TCP ports:** **Video** :The default value is port 5700. Users can modify this value. However, it should generally have a value between 5501 and 64000. Values below 5501 are considered reserve values for Windows and routers. Values above 6400 are not valid. **Send data port -** All communication must be done through a designated port. By default data is sent out from the local system through port 5600. Users can modify this value. However, it should generally have a value between 5501 and 64000. Values below 5501 are considered reserve values for Windows and routers. Values above 6400 are not valid. communicated can also designate a specific port through which it communicates data. By default the target system data port is also set to port 5600. Users can modify this value. However, it should generally have a value between 5501 and 64000. Values below 5501 are considered reserve values for Windows and routers. Values above 6400 are not valid
4 channel PCI Video capture card	**QLR0450**	*4 ports needed Any port from a range from 2000-65000*	**Default ports:** • **Video port** :2000 • **Audio port:** 2001 • **PTZ control** : 2002 • **Remote Search** :2003
4 channel USB video capture card	**QDU470**	*4 ports needed Any port from a port range from 2000-65000*	**Default ports:** • **Video port** :2000 • **Audio port:** 2001 • **PTZ control** : 2002 • **Remote Search** :2003

NETWORKABLE 2 PAGE - 8 CHANNEL 21" COLOR QUAD WITH 4 NIGHT VISION CAMERAS	**L21Q784**	***80***	**http1 : 80 TCP** **http2 :blank (any port)**
NETWORKABLE 2 PAGE - 8 CHANNEL 14" COLOR QUAD WITH 4 COLOR NIGHT VISION CAMERAS	**L14Q684C**	***80***	**http1 : 80 TCP** **http2 :blank (any port)**
IP Camera	**IPSC1240**	***80***	**http1 : 80 TCP** **http2 :blank (any port)**

- Note : Port 80 is the http port for the Internet browser and it is usually blocked by the Internet Service Provider. We recommend using a different port like 2000 to avoid possible problems.

- For example using 192.168.1.5, on the web browser type http://192.168.1.5:2000

ROUTERS SECTION

This section shows the procedure to create port forwarding rules.
The information is presented by manufacturer and model.

LINKSYS

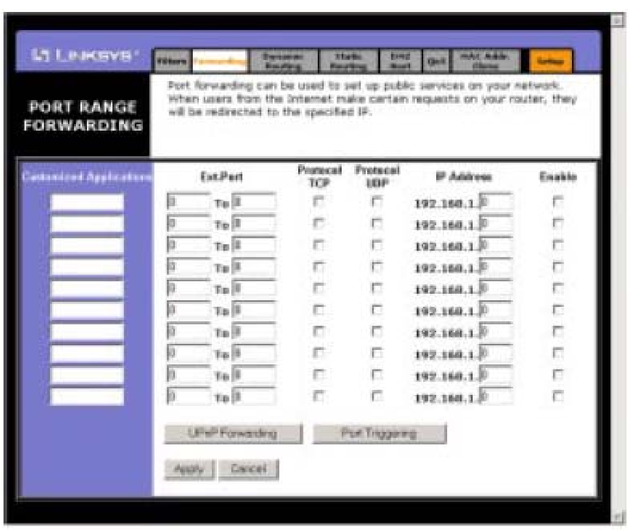
BEFDSR41W, BEFN2PS4, BEFSRU31, BEFSRU31, BEFSR41 V1& V2, BEFSR V2FW 1.40.2, BEFSR41 V3 V4 & V5, BEFSR81, BEFSX41, BEFSX41-CA, BEFVP41 V1&V2, BEFVP41-CA, BEFW11S4, BEFW11S4 v2,v3, & 3.2, BEFW11S4 V4, BEFW11S4-CA v2 & v4, WRT51AB, WRT55AG

Log in to the Router's Web-based Utility. (This is usually done by opening your web browser, entering 192.168.1.1 in the Address field **(or your "default gateway" IP address from your PC**), and pressing the Enter key. You should see the following screen.



Press the **STATUS** Tab and write the WAN IP address for future reference for the remote connection .

To open the ports press on the **ADVANCE** tab on the top and Select **Port Range Forwarding**



On the left hand side put the name of the application.

Application name: can be any description of your Network Device attached on you LAN

You are forwarding ports in the **Customized Application** box.

In the **Ext. Ports** box put the port ranges you wish to forward. If you are unsure of the port range/ranges check the Ports list page or the **network device (*)** model you are working with.

Example :
For **port 1080**, start with port 1080, and end with port 1080.

Check on the protocol type **TCP**, **UDP**, or just both. Check both if you are unsure of the protocol type. In the **IP Address** box, enter your **Network device(*)** IP address

Click the **Enable** check box on the right hand side.

If you have more ports continue with the next line.

Click **Apply** at the bottom of your screen to save your changes

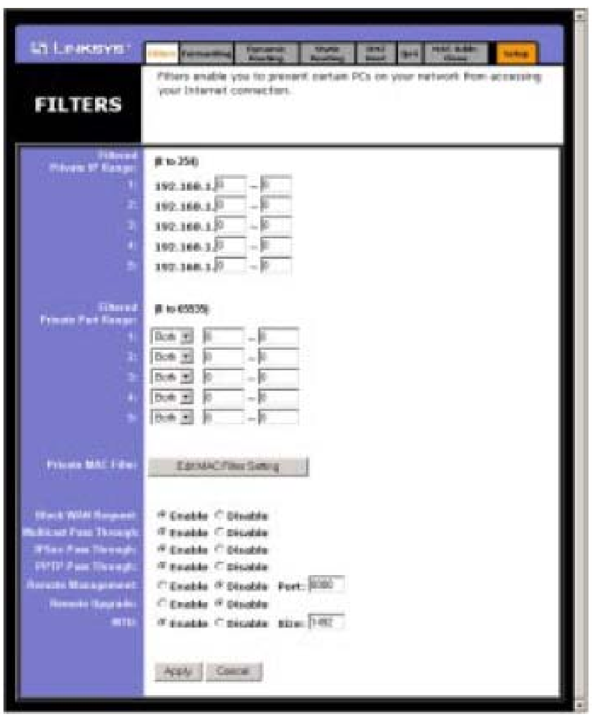
(*) See page 5 for more information

DISABLE BLOCK WAN REQUEST FEATURE.

Press the **Advance** tab and select the **Filters** tab.

Click and disable the **Block Wan request** feature.

When finish click on **Apply** to save the changes.



DMZ OPTION

If you don't want to enable the port range forward feature you can use the DMZ option to open all the port at once.

Click on the **Advance tab** on the top

Click on the **DMZ Host** option



Enter your **network device (*) IP address** and press apply.

(*) See page 5 for more information

LINKSYS. wireless

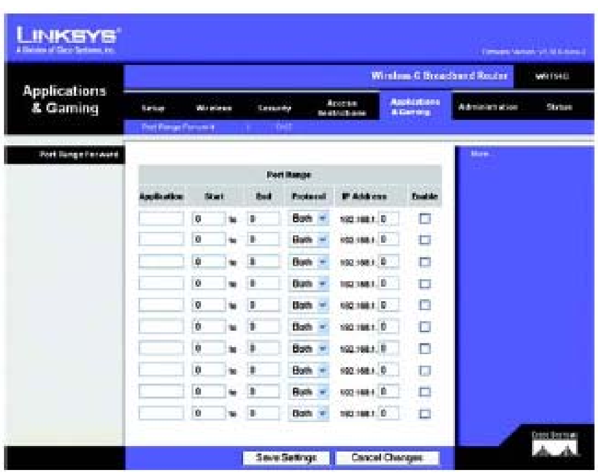
BEFSR41-CA, BEFSX41 V1.50, BEFW11S4 v1.50.10, BEFW11S4 v1.50.14, RT31P2, WAG54G, WRK54G, WRT54G, WRT54G v1.1 v2 & CA, WRT54G v2.04, WRV54G, WRV54G-CA

Log in to the Router's Web-based Utility. (This is usually done by opening your web browser, entering 192.168.1.1 in the Address field **(or your "default gateway" IP address from your PC**), and pressing the Enter key.) You should see the following screen.



Press the **STATUS** Tab and write the WAN IP address for future reference for the remote connection .

To open the ports press on the **Applications and Gamming** Tab on the top. Click on **Port Range Forward** Option



On the left hand side put the name ** of the application. You are forwarding ports in the **Application** box.

***** Application name**: can be any description of your Network Device attached on your LAN*

In the Start and End boxes put the port ranges you wish to forward. If you are unsure of the port range/ranges check the Ports list page or the network device model you are working with.

Example :
For **port 1080**, start with port 1080, and end with port 1080.

Check the protocol type **TCP**,**UDP**, or just both. Check both if you are unsure of the protocol type. In the **IP Address** box, enter your **Network Device (*)** IP address to forward the ports to.

Click the **Enable** check box on the right hand side.

If you have more ports continue with the next line.

Click **Save Settings** at the bottom of your screen to save your changes

(*) See page 5 for more information

DISABLE BLOCK WAN REQUEST FEATURE.

Press the **SECURITY** tab

Click and disable the **Block Wan request** feature.

When finish click on **Save Settings** to save the changes.



DMZ OPTION

If you don't want to enable the port range forward feature you can use the DMZ option to open all the port at once.

Click on the **APPLICATIONS AND GAMMING** Tab on the top.

Click on the **DMZ** option

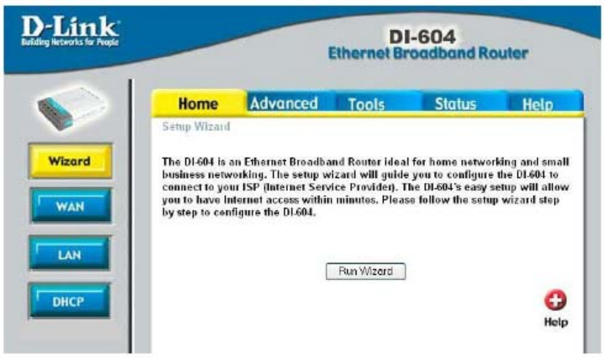


Enter your **local network device IP address** and press **Save Settings**

DLINK

Models DI-514, DI-524, DI-604, DI-614+, DI-624, DI-704P (revB), DI-704P (revC), DI-704UP, DI-707P, DI-714P+, DI-754, DI-764, DI-774, DI-784, DI-804HV, DI-808HV, and DI-824VUP:

Open your web browser and enter the IP address of your router (192.168.0.1). Enter username (admin) and your password (leave blank).



Press the **STATUS** Tab and write the WAN IP address for future reference for the remote connection .

To <u>open the ports</u> press on the **ADVANCE** Tab on the top. Click on **Virtual Server** Option

Enter the name of the service (Ex. Your DVR description) you are trying to forward ports for in the **Name** box.



Enter the private **network device (*) IP address** into the **Private IP** box.

Select the protocol type from the **Protocol type** drop down box. If you are unsure of the protocol type select both if available. If both is not an option you would need to create a duplicate configuration, one with TCP selected the other with UDP selected.

Enter the private port into the **Private Port** box. Generally you should enter the same port into the **Public Port** box. For port information check the Ports list page or the ***Network Device*** (*) model

Example using port 1080 :

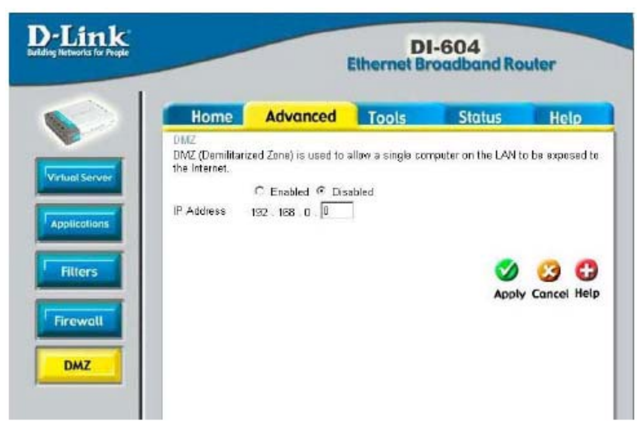
- *Private Port 1080*
- *Public Port 1080.*

The schedule should be set to **Always**. Put a dot in the **Enable** circle at the top to enable your profile.
If you have more ports continue with the next line.
Click **Apply** at the bottom of your screen to save your changes.

DMZ OPTION

If you don't want to **enable the ports** feature you can use the **DMZ** option to open all the ports at once.

Click on the **Advance** Tab and Select the **DMZ** Option.



Enter your ***network device local IP address*** click on **enable** and press **Apply.**

(*) See page 5 for more information

SMC

2804WBRP-G, 2804WBR V1, V2, 7804WBRB

DMZ Option Only

Open a web browser. In the address bar type the IP address of your router. This IP address is **192.168.1.2** by default. Press **enter**



Step 2:
You should now see a login screen and it should be prompting you for a password. We want to log in as administrator, so enter your administrator password here. By default the administrator password is **smcadmin**. Click the login button to log into the router.

Step 3:
Click **Firewall** on the left hand menu. This will drop down a sub-menu on the left hand side.



Step 4:
Click **DMZ** in the left hand menu. This will open up the screen below.



Step 5:
A Static IP address is need for this function. Click in the **Enable DMZ Yes** radial button. In the **Public IP address** box, you enter the **network device** IP (*) address you wish to open to the internet.

Click **Apply** at the bottom of the page.

Click the **STATUS menu** at the left and write the **WAN Internet IP address** for future reference for the remote connection .

(*) See page 5 for more information

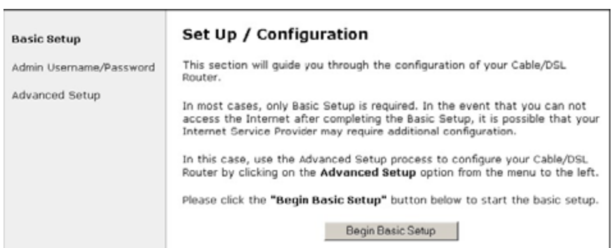
Actiontec

GT701-WG, GT704WR, R1020S, R1020S(U), R1520SU, R1524SU-1

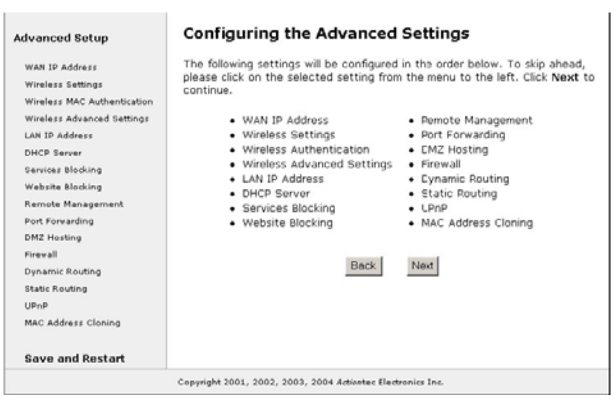
Enter the IP address of your router in the address bar of your browser.. By default the IP address should be set to 192.168.0.1.



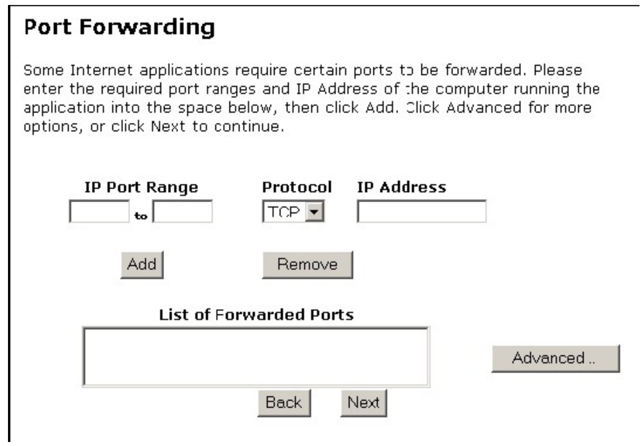
Click **setup/configuration**. You should see the following menu.



Click **ADVANCE** at the side of the menu. You will see the following menu



Click on Port Forward on the left hand side. You should see the following menu.



Enter the following information :

IP Port Range. Enter a port range.

> ***Example*** *: For port 1080, start with port 1080, and end with port 1080.*

\- **Protocol** : Select the protocol type , TCP or UDP
- IP address : Enter your Network device (*) IP address.

Click on **ADD** to add the settings to the box below.

If you have more ports to open repeat the procedure.

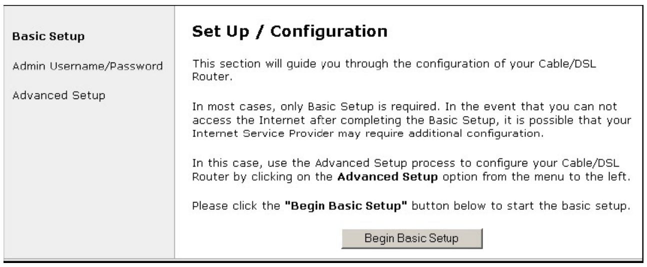
To finish click on **Save and RESTART**

(*) See page 5 for more information

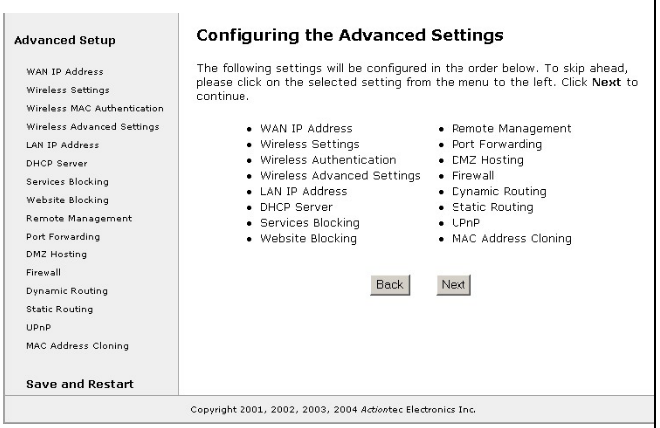
DMZ OPTION.

If you don’t want to use the **port forward** feature you can use the **DMZ** option to open all the ports at once

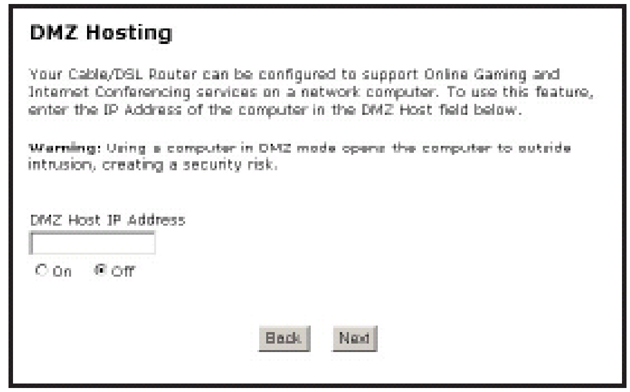
Click **setup/configuration**. You should see the following menu.



Click **ADVANCE** at the side of the menu. You will see the following menu



Click on **DMZ Hosting** option



Enter the **Network device** (*) IP address, Then you click in the **On** radial button.

Now click on **Save and Restart** on the left hand side. The following menu should appear.



To finish click **Save and Restart**.

Click the **STATUS menu** and write the **WAN Internet IP address** for future reference for the remote connection .

(*) See page 5 for more information

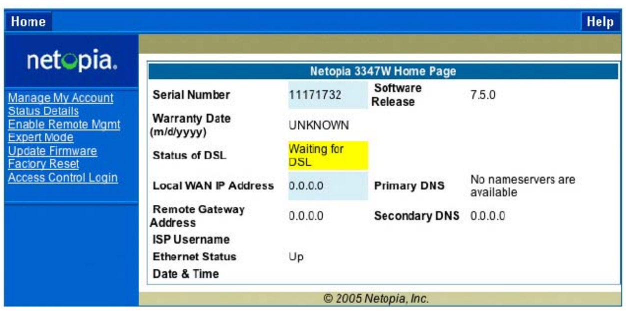
NETOPIA

CAYMAN 3300

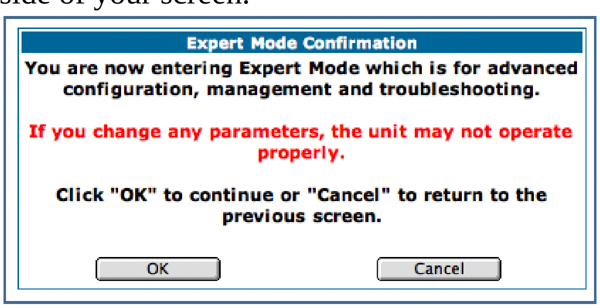
Enter the IP address of your router in the address bar of your browser.. By default the IP address should be set to 192.168.1.254.



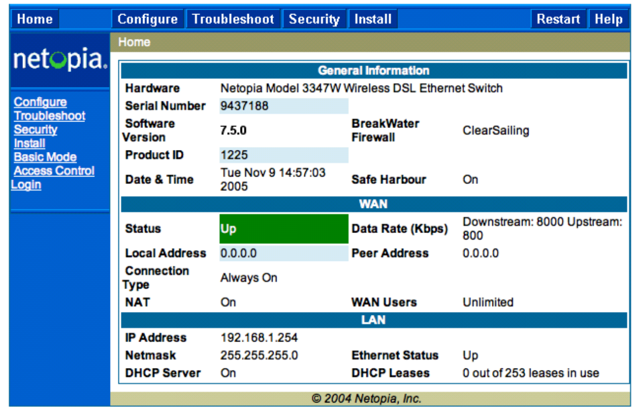
Enter your user name and password. By default the username is **admin**, and the password is blank. Click the **OK** button to log in to your router.



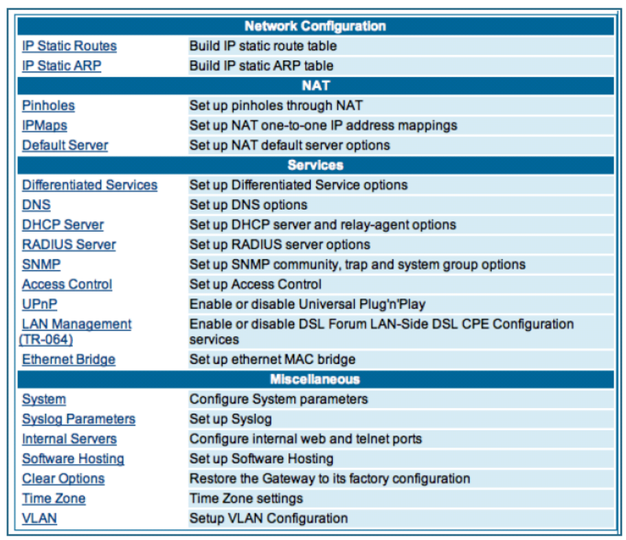
Click the **Expert Mode** link on the left hand side of your screen.



Click OK to enter the export mode

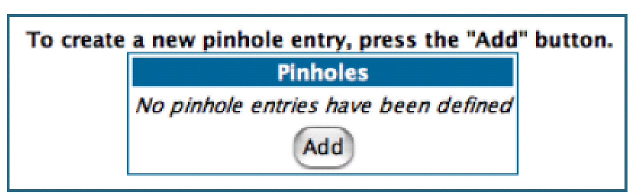


- Click on **CONFIGURE** link on the top.
- Click on the **ADVANCE** link

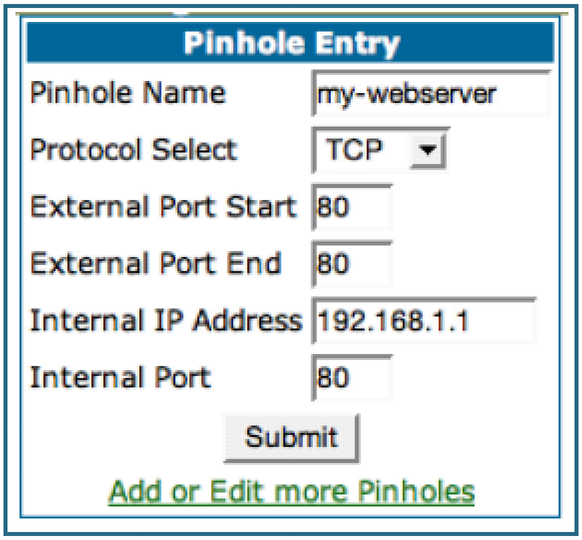


On the **ADVANCE** Network menu click on the **PINHOLES** Option.

This menu option will allows you to enable the port forwarding option.



Click the **ADD** button to add a new pinhole configuration to your Router.



-**Pinhole Name:** your network device name (ex DVR, video server , or PC)
-**Protocol type**: TCP or UDP
-**External port start** : Enter you start port
-**External port end** : you end port

Example using port 1080.

External start port 1080
External end port : 1080

- **Internal IP address**: Enter your Network device (*) IP address. (ex DVR , video server or PC attached)

- **Internal port** :Enter the lowest port.

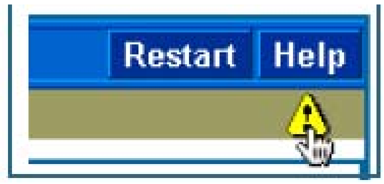
Example :If you open a range of ports from **80 to 1080**, use 80 as the lowest port.

Click the **Submit** button

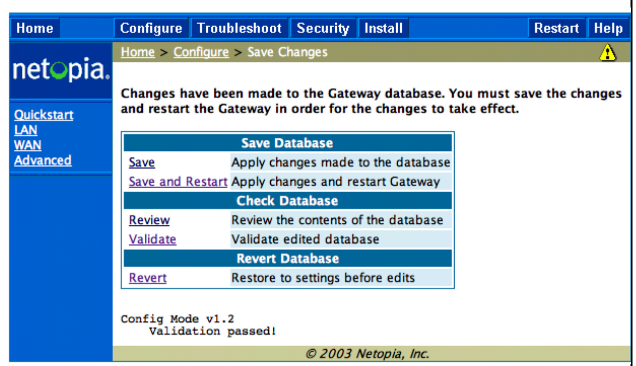
If you need to open more ports click on the **ADD** button and repeat the procedure.
(*) See page 5 for more information

If you finished click on the **Alert** button.

The Alert button is a Yellow triangle at the left top area of your menu



Click on **SAVE and Restart**



.

WESTELL DSL MODEM/ROUTER

B90-2200- 30-05 (Bellsouth)

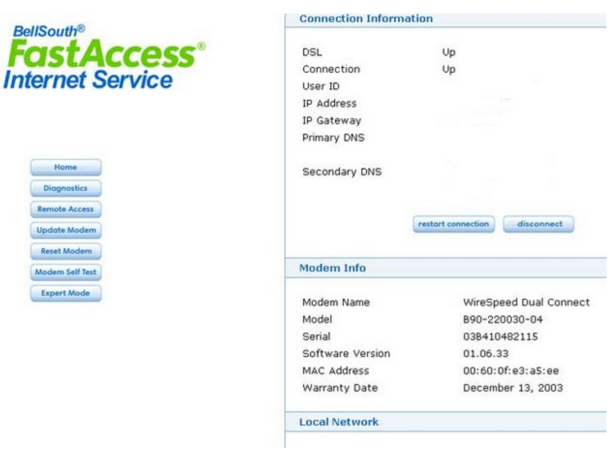
Open a web browser like internet explorer or Netscape



Enter the IP address of your router in the address bar of your browser. By default the IP address should be set to 192.168.1.1.

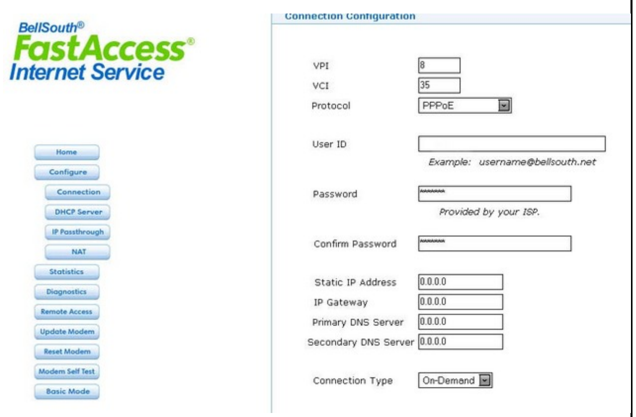


You should see a box prompting you for your username and password. Enter your username and password now. By default the username is blank, and the password is **NOLOGIN**.
Click the **OK** button to log in to your router.

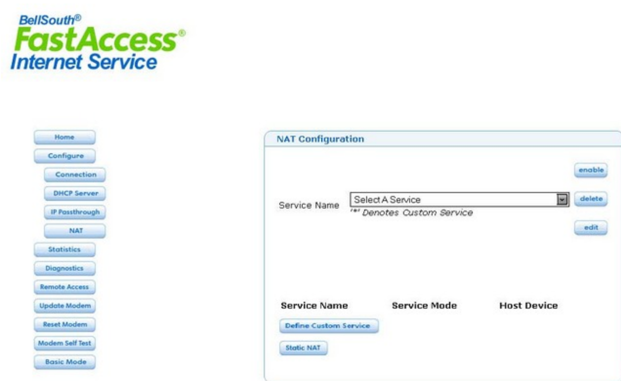


Click the **Expert Mode** button on the left hand side of your screen.

Then under Home click the **Service Configuration** button on the left hand side of your screen.

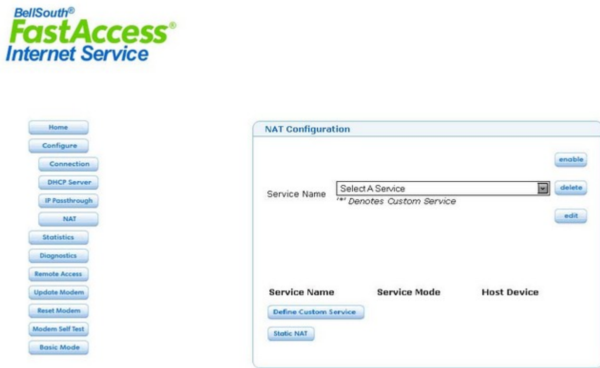


In the new menu that appeared under Configuration, click the **NAT** button.



Continue on next page…….

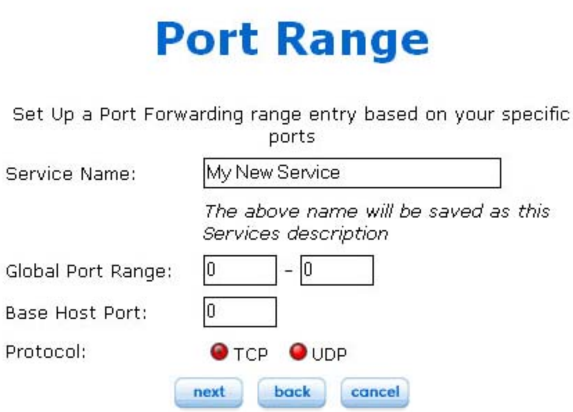
.



Click the **Define Customer Service** button to move to the next page



Put a dot in the **Port Forwarding Ranges of Ports** radial button. Then click **next** at the bottom of this page



Enter a name for the program or device you are forwarding ports for in the **Service Name** box. Ex : DVR

Enter the ports to forward into the **Global Port Range** boxes.

Example: for port 2000-2000

The smallest port number should go into the box on the left, while the largest port number should go into the box on the right.

Main port the program uses into the **Base Port** box. This is your lower port from your list.

Examples: *If you are using only one port like 2000 enter 2000-2000.. If your are using a range of port like 80-1080, the base port is 80*

Select the protocol type using the UDP or TCP radial buttons.

Click the **Next** button when you are done making changes.

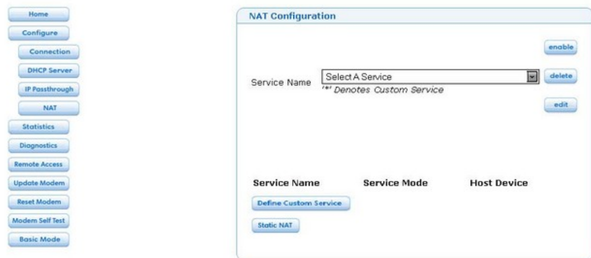


If you need to add additional ports, click the **Add** button.

When you are done adding ports/protocol types, click the **Close** button

Continue on Next page….

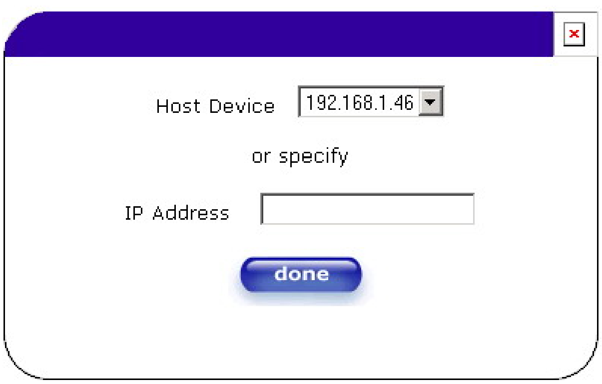
Once you finished adding all the ports go back to the **service** configuration screen



Use the **Service Name** drop down box to find and select the first configuration you just created for your **network device** name (Ex DVR) .

Then click the **Enable** button to enable it. You will need to repeat this step for each service that you created

Once you press enable the following screen will appear



Select and find your **network device (*) IP address** or enter your IP address to forward the ports and complete the procedure,
Press **Done** to finish

(*) See page 5 for more information

2200 (Verizon)

Versalink 327W

Open a web browser like internet explorer or Netscape

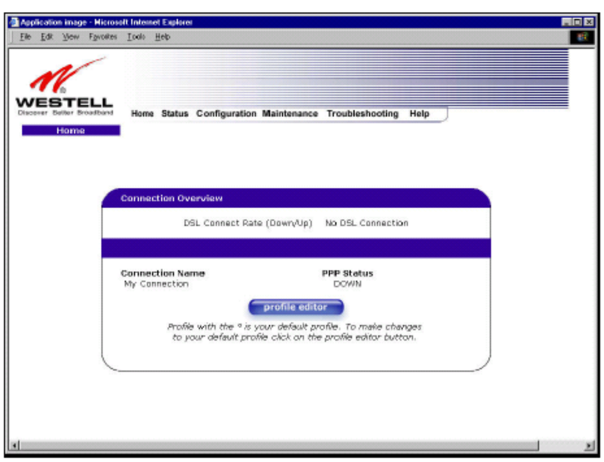


Enter the IP address of your router in the address bar of your browser. By default the IP address should be set to 192.168.1.1



You should see a box prompting you for your username and password. Enter your username and password now. By default the username is blank, and the password is **NOLOGIN**.

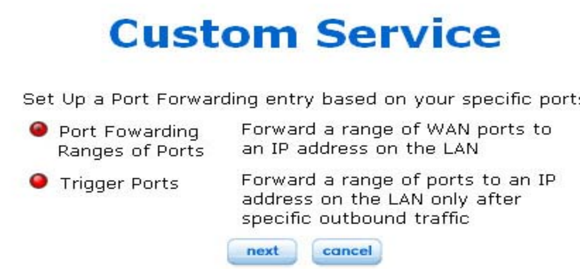
Click the **Ok** button to log in to your router.



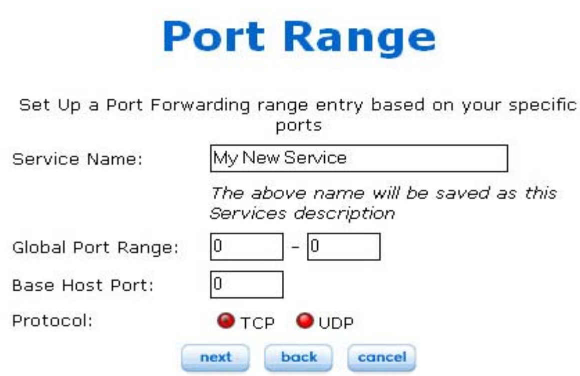
Click on **Configuration** on the top Menu and Select **Service configuration**



Click the **Define Customer Service** button to move to the next page.



Put a dot in the **Port Forwarding Ranges of Ports** radial button. Then click **next** at the bottom of this page.



Continue on next page…….

Enter a name for the program or device you are forwarding ports for in the **Service Name** box. Ex : DVR , Video server or PC.

Enter the ports to forward into the **Global Port Range** boxes.

Example: for port 2000-2000

The smallest port number should go into the box on the left, while the largest port number should go into the box on the right.

Main port the program uses into the **Base Port** box. This is your lower port from your list.

Examples*: If you are using only one port, for example 2000, enter 2000-2000. Your base port will be 2000.*

If your are using a range of port like 80-1080 the base port is 80.

Select the protocol type using the UDP or TCP radial buttons.

Click the **Next** button when you are done making changes.



If you need to add additional ports or you need to specify both protocol types, click the **Add** button. Then repeat the above steps, and specify the other protocol or add another port.

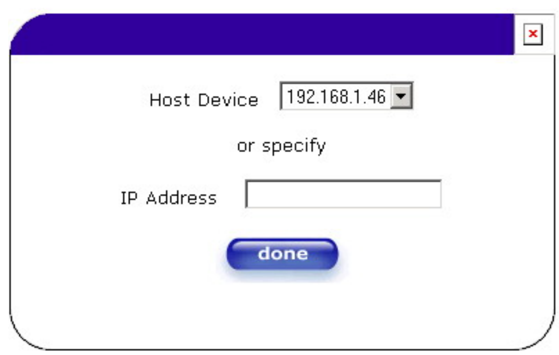
Once you finished adding all the ports go back to the service configuration screen



Use the **Service Name** drop down box to select the first configuration you just created at your device name (Example: DVR) .

Then click the **Enable** button to enable it. You will need to repeat this step for each service that you created

Once you press enable the following screen will appear



Select and find your network device (*) **IP address** or enter your IP address to forward the ports and complete the procedure, Press **Done** to finish

(*) See page 5 for more information

Open a web browser like internet explorer or Netscape



Enter the IP address of your router in the address bar of your browser. By default the IP address should be set to 192.168.2.1.



You should prompted for your password. Enter your password now. By default the password is blank. Click the **Ok** button to log in to your router.



On the left hand side you will see a series of four menus.

In the one titled firewall click **Virtual Servers**. This will bring you to the following menu.



We are going to be working in the table portion of this menu to forward ports. All the settings to forward a port or series of ports will go on one line. If you want to forward additional ports you can fill out a second line with additional information.

Description box. A good description would be the name of the network device (*) (Ex DVR) you are forwarding ports for.

Inbound Port box . Enter the port range. This range would be specified by entering the starting port number in the first box under inbound ports and the ending port number in the second box under inbound ports. Do the same thing for the **Private Port** boxes.

- Type :Select the protocol type **. TCP or UDP or Both** .

Note *: If you are unsure of the protocol type, just select both.*

Continue on next page……

(*) See page 5 for more information

- Enter your network device (*) **IP address** you wish to forward in the **Private IP Address** box.

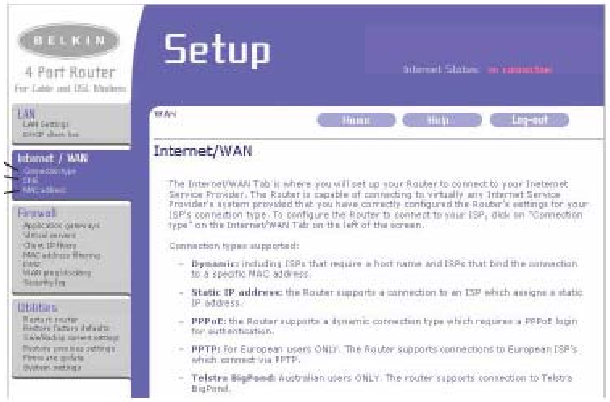
- Put a check in the **Enable** checkbox..

Click on **Apply changes** to finish

(*) See page 5 for more information

DMZ Option

On the Setup screen select DMZ at the left area of your menu



You will see the following menu



Enter your Network Device (*) **IP address** and click on **enable**.

Press **Apply changes** to finish

(*) See page 5 for more information

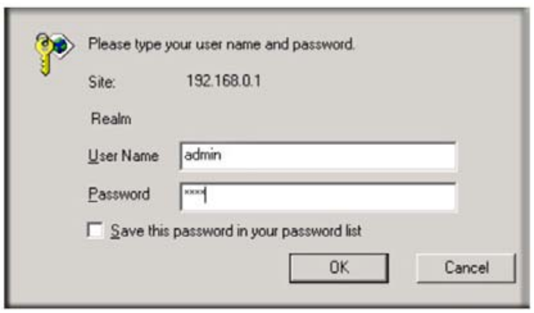
NETGEAR

RP614v1 & v2, WGR614, WGT624v1 & 2,

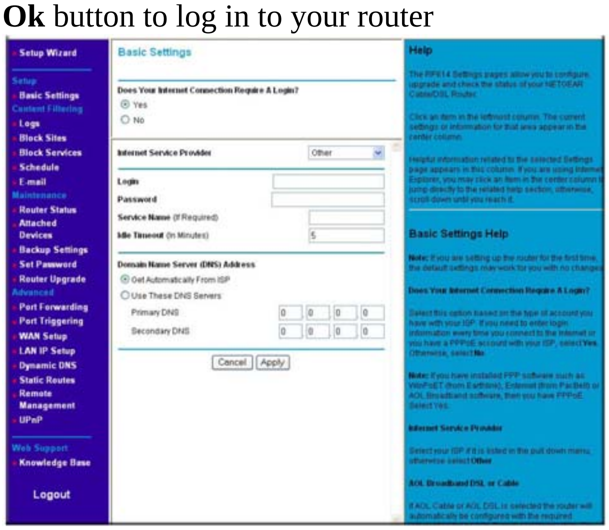
Open a web browser like internet explorer or Netscape



Enter the IP address of your router in the address bar of your browser. By default the IP address should be set to 192.168.0.1.

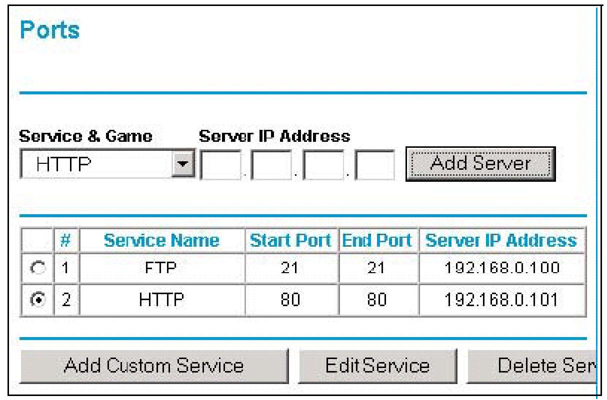


You should see a box prompting you for your username and password. Enter your username and password now. By default the username is **admin**, and the password is blank. Click the **Ok** button to log in to your router

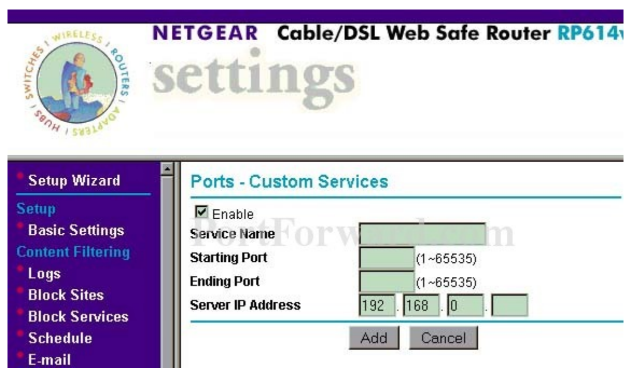


The basic settings window will be visible

On the menu bar to the left under **Advanced** click **Port Forwarding**
You should now be at the Port Forwarding menu as shown below.



To create a new port forward __**service**__ click on **Add Custom Service** button.



Enter the information requested on the menu.

- Service Name : Enter the description of your DVR or device or service (PC) . Ex DGR200

-Starting port. Enter the lowest port
-Ending port. Enter the Highest port
-Server IP address: Enter your network device(*) IP address

- Click **Apply** at the bottom of the menu to finish.

(*) See page 5 for more information

DMZ Option

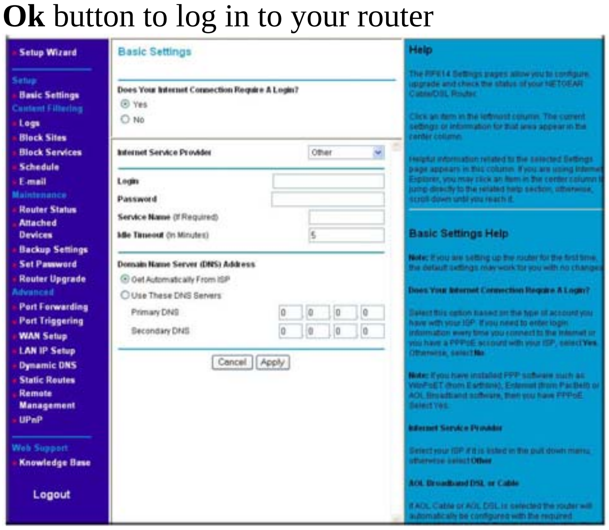
Open a web browser like internet explorer or Netscape



Enter the IP address of your router in the address bar of your browser. By default the IP address should be set to 192.168.0.1.



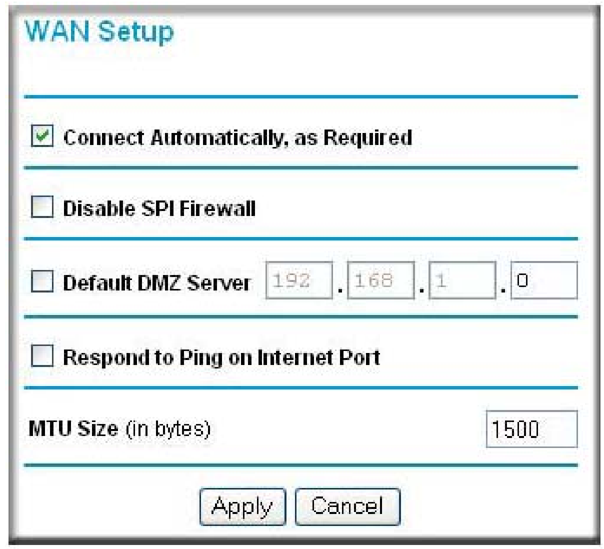
You should see a box prompting you for your username and password. Enter your username and password now. By default the username is **admin**, and the password is blank. Click the **Ok** button to log in to your router



The basic settings window will be visible

On the menu bar to the left under **WAN Setup Options**

You should see the WAN setup menu



Click on **Default DMZ server** and enter your network device (*) IP address .

Click on **Apply** to Save the settings.

(*) See page 5 for more information

2 WIRE

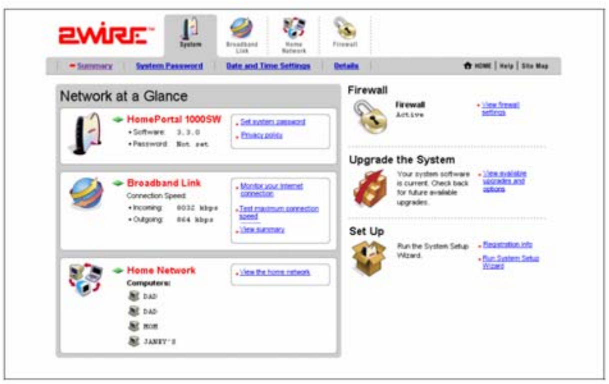
1000HW, 1000S, 1000sw, 1800HG

Open a web browser like internet explorer or Netscape

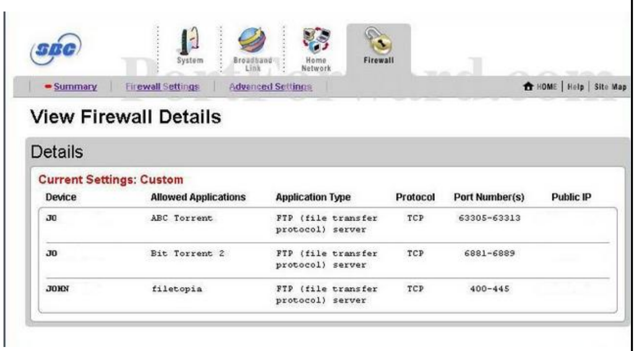


Enter the IP address of your router in the address bar of your browser. By default the IP Address should be set to gateway.2wire.net

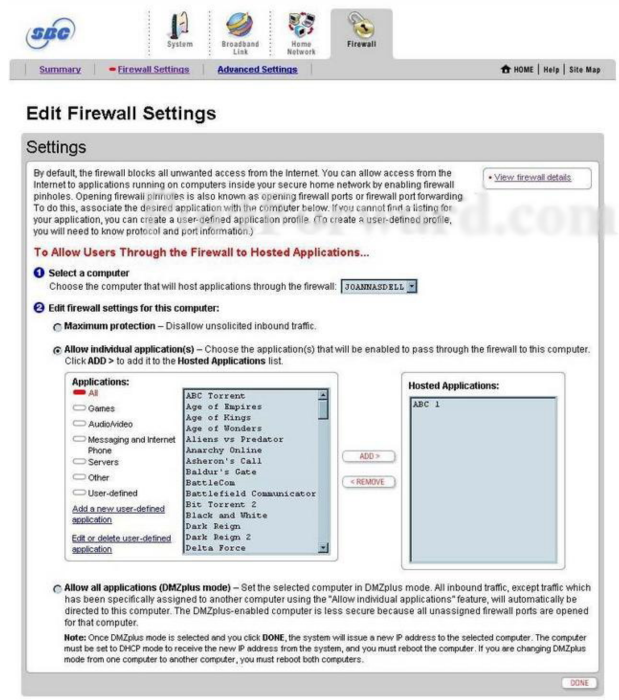
The basic settings window will be visible



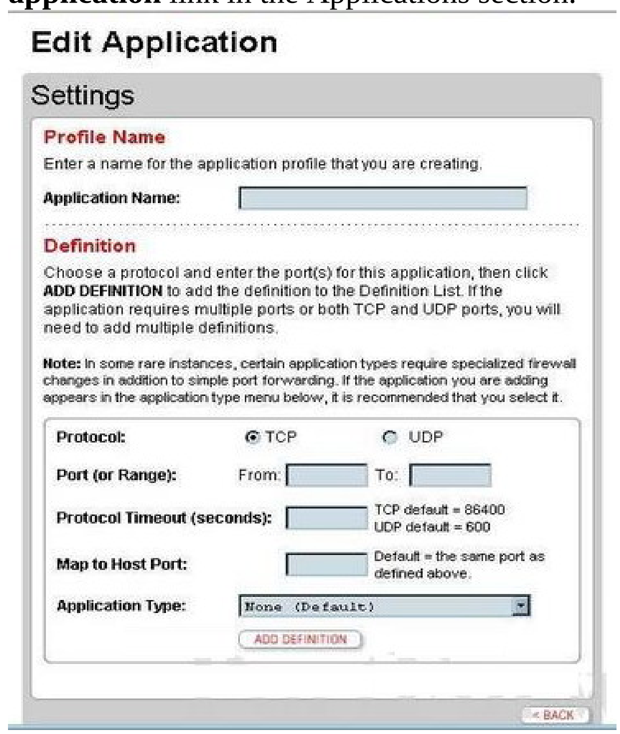
Click on the **FIREWALL** button on the top



Click **FIREWALL SETTINGS** in the firewall menu on the top of the screen



Click the **Add a new user-defined application** link in the Applications section.



Continue on next page……..

Enter the following information:

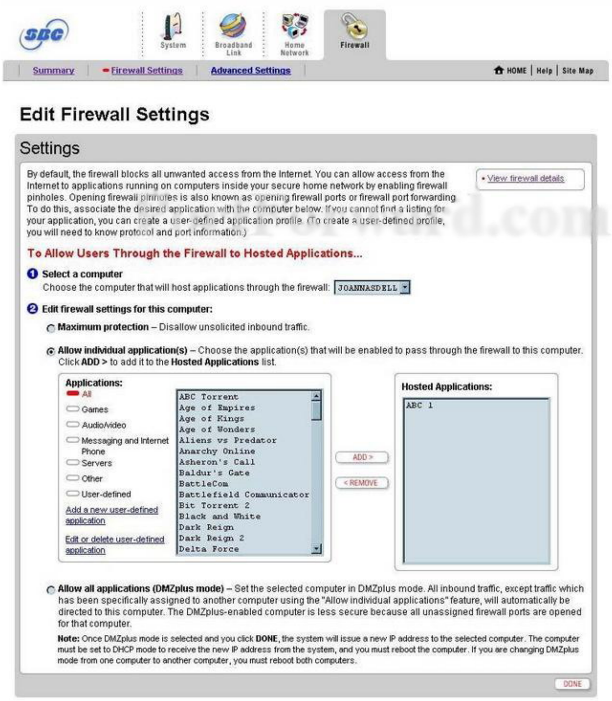
-Application name. Enter the name of the program (Ex. Your DVR, video server description).

-Protocol: TCP or UDP.
-Port Range . From (the lowest port)
To (the Highest port)
-Protocol timeout (seconds) :
----For TCP enter : 86400
----For UDP enter : 600

-Map to Host port : Leave it empty
-Application type: Set to None

Click **ADD Definition** to add this definition to your router.

Click the **BACK** button at the bottom page to go back to the previous menu.



Select a computer option:. device (your network device(*) IP address) or computer your want to forward.

On the **Applications** list scroll down and find the Application you just created and highlight it.

Click the **ADD** button to move it to the **Hosted Application** box at your right.

Click **DONE** button at the bottom of the screen to finish

Note :If you have multiple ports , you have to create an application for every range of ports

. (*) See page 5 for more information

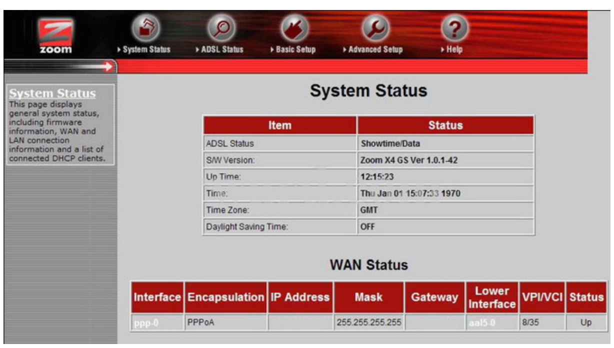
ZOOM

X4 5551

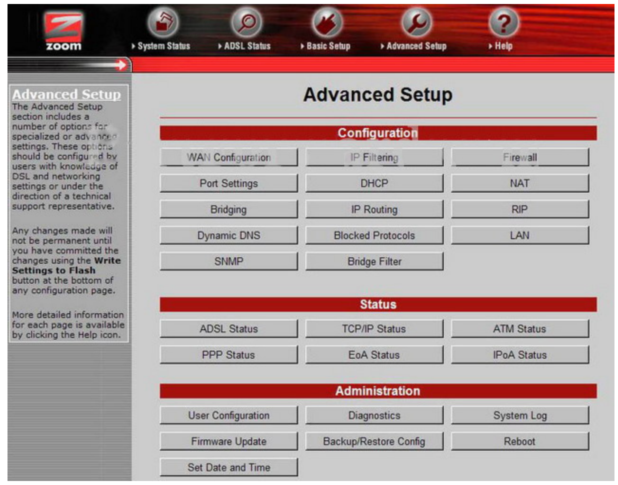
Enter the IP address of your router in the address bar of your browser. By default the IP address should be set to 10.0.0.3



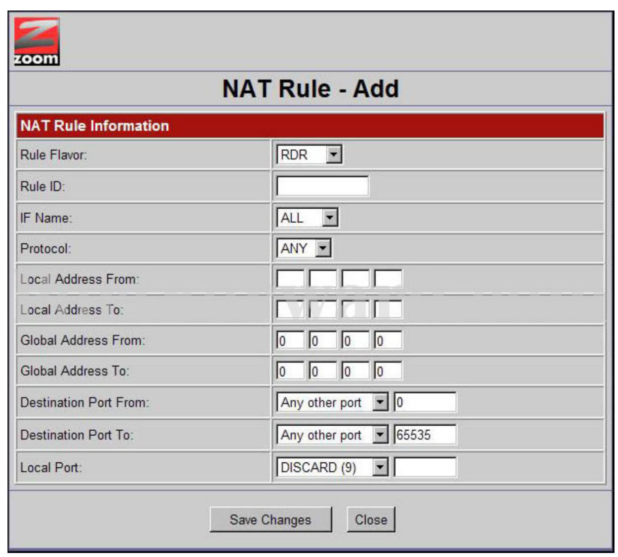
You should prompt for your password. Enter your password now. By default the password is blank. Click the **Ok** button to log in to your router



Click the **Advanced Setup** button at the top of your screen. You should now see the following screen.

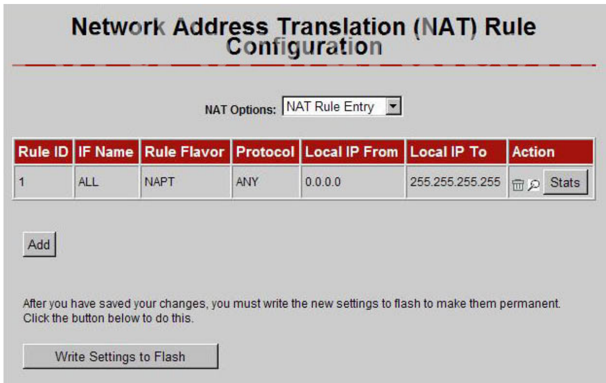


Click the **Advanced Setup** button at the top of your screen. You should now see the following screen



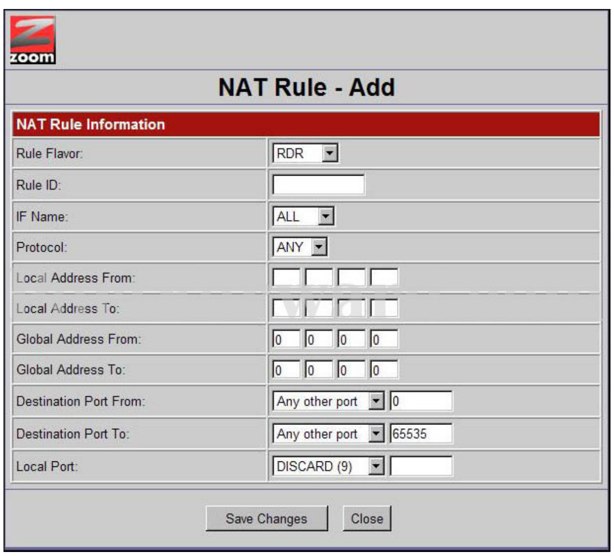
Continue on Next page…….

In the middle of this page you will see a **NAT Options** drop down box. Click the down arrow and select **NAT Rule Entry**



Take note of the **Rule ID's** that are in use.

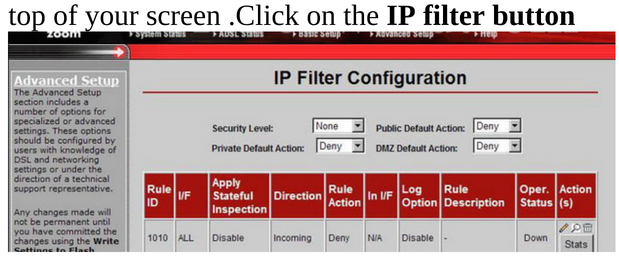
Usually you want these rule numbers to increment by 10. So the new rule you create should be 10 more than the largest rule number here. At the bottom of the page click **Add**. You should now see another window



Enter the following Settings

1. **Rule Flavor** drop down box. Select **RDR** from the list.
2. Enter a number in the **Rule ID** box. This number needs to be unique, so some number that was not listed on the services page.(any number not listed)
3. **IF Name** box. Select **ALL**
4. **Protocol** drop down box : Select the protocol type of the ports you are forwarding.(if you don't know select ALL)
5. **Local Address From** : Enter your local device network (*) IP address
6. **Local Address To** : Enter your local DVR Ip address
7. **Global Address From:** Enter 0.0.0.0
8. **Global Address To** Enter 0.0.0.0
9. **Destination Port From :** Enter your lower port of your port range
10. **Destination Port To** : Enter the highest port of your port list .
    a. Example 80 - 1080
11. **Local Port** box : Put a zero in it.
12. Click the **Save Changes** button at the bottom of your screen.

Once again click on **Advance setup** button at the top of your screen .Click on the **IP filter button**



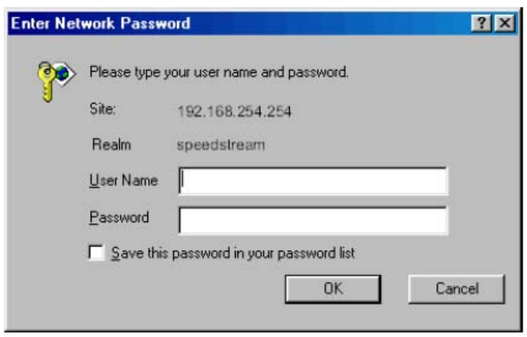
The **Security Level** drop down box should be set to none.
The **Private Default Action**, **Public Default Action** and **DMZ Default Action** should all be set to ***Accept.***
Click the **submit** button at the bottom of the page.
Now we are going to save these changes.
Make sure to write your settings to flash, and reboot your router before the settings will take effect.

(*) See page 5 for more information.

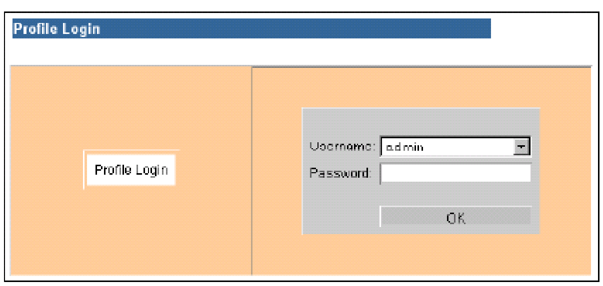
EFFICIENT (SIEMENS)

Speedstream 5100,5200, 5400, 5500

Enter the IP address of your router in the address bar of your browser. By default the IP address should be set to 192.168.254.254

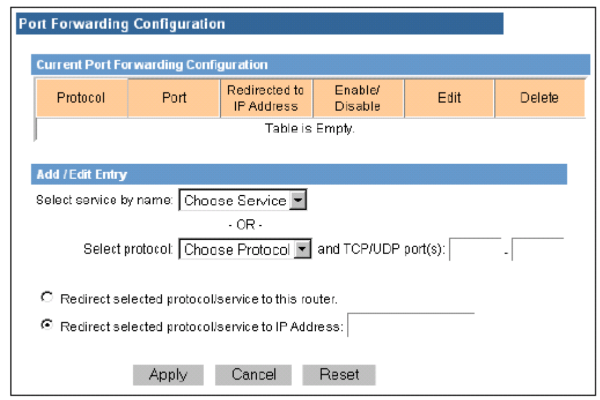


Enter your username and password now. By default both the username and password are blank. Click the **Ok** button to log in to your router.



On the main menu click **Login**. Select **admin** from the **username** drop down box. Enter the admin password in the **Password** box. Click the **Okay** button to get back to the main menu..

Click on the SETUP Menu .



Select Protocol drop down box. Then enter the port range in the **TCP/UDP Ports** box.

At the right side of the screen enter the lowest port number and highest port number should go in the box on the right.

Example TCP   80 - 1080

Click the **Redirect selected protocol/service to IP address** radio button.

Enter the **IP address** you wish to forward this service to in that box. (your network device (*) IP address)

Then click **Apply** to save your changes.

(*) See page 5 for more information

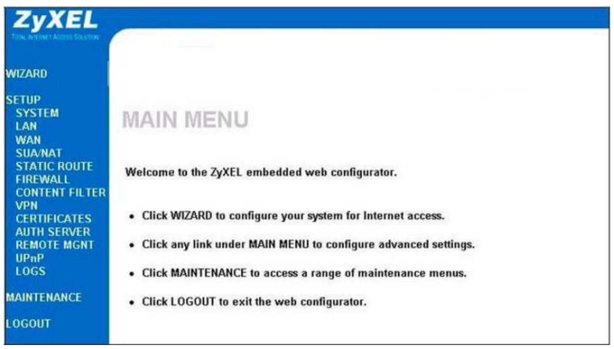
ZyXEL

Zywall1, Zywall2WE, Zywall2, Zawall10, Zywall100

Enter the IP address of your router in the address bar of your browser.

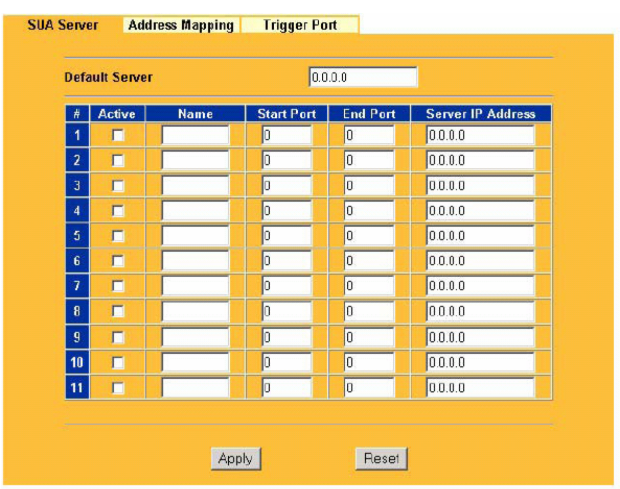


By default the IP address should be set to 192.168.1.1



You should prompted for your password. Enter your password now. By default the password is **1234**. Click the **Ok** button to log in to your router. In the left hand menu click **SUA/NAT**.

You should now see the following menu.



Enter the following information to open the ports:

-- Check on the **Active** check box

-Name : Enter the name of your network device (Example video server)

-Start Port: Enter your lower port of your list

Example: opening ports from 80 to 1080

--- Start port : 80

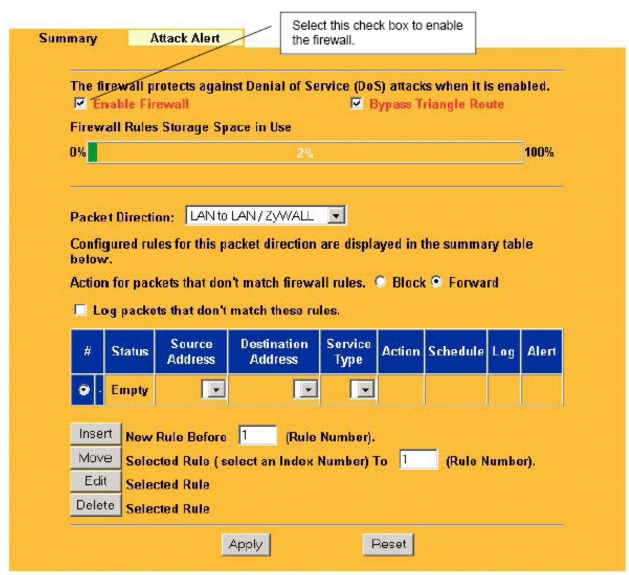
--- End Port : 1080

End Port: Enter the highest port

Server IP address: Enter your network device (*) Ip address.

Repeat the procedure to open more ports if needed.

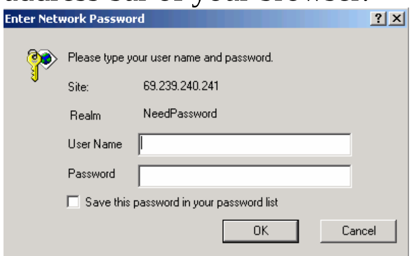
Press **Apply** to finish.



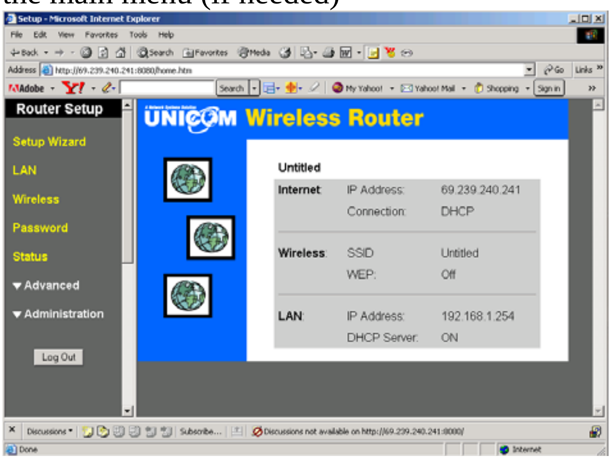
UNICOM wireless

DMZ Option only

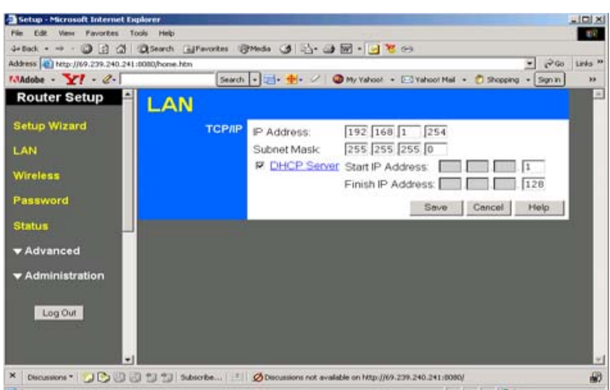
Enter the IP address of your router in the address bar of your browser.



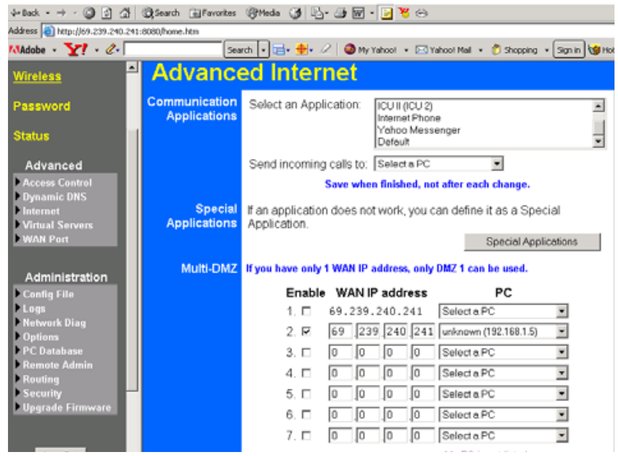
Enter your User name and password to access the main menu (if needed)



Click on **LAN at** the left side of the menu



Click on **Internet** on the **Advanced** menu at left side of the screen.

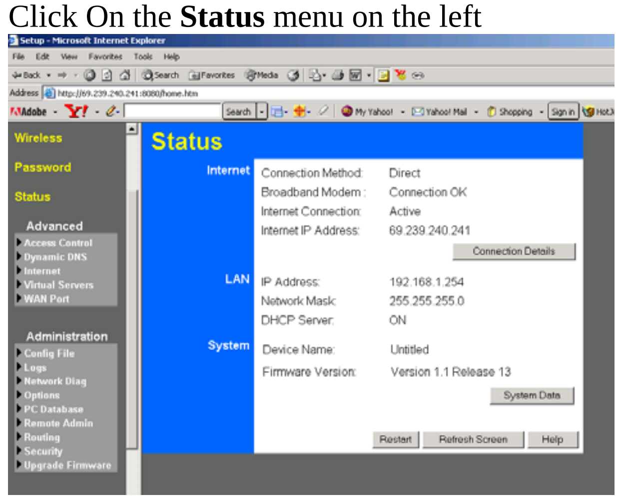


To enable the **DMZ** option, click enable on the first line.

Select a PC. Click the drop down menu at the right and locate your network device (*) IP address.

Press **Save** to save the settings

Click On the **Status** menu on the left

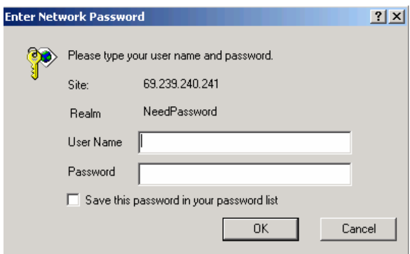


Write down your Internet IP address for reference. Press Restart to save the settings

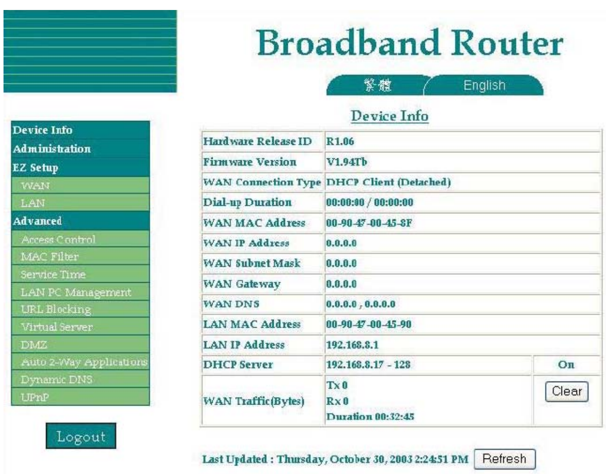
(*) See page 5 for more information

DMZ Option only

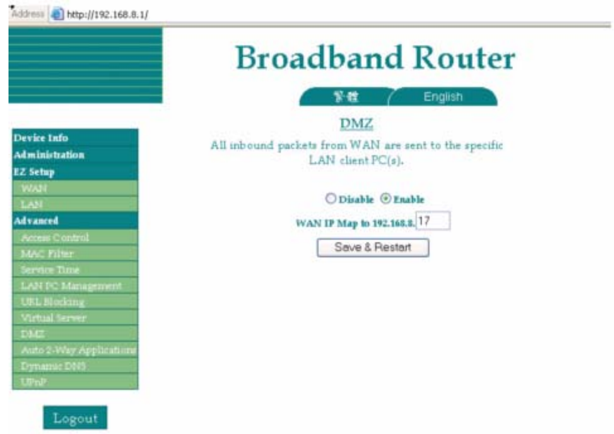
Enter the IP address of your router in the address bar of your browser. The default IP address is 192.168.8.1



Enter your User name and password to access the main menu. By default the user name is blank and the password is **admin**.



In the menu on the left hand side of your screen, click **Advanced**. In the menu under Advanced click the **DMZ** link.



By default the DMZ page is disabled. Click the **Enable** radio button.

Enter your Network device (*) IP address on the DMZ menu

Then click the **Save and Restart** button.

(*) See page 5 for more information

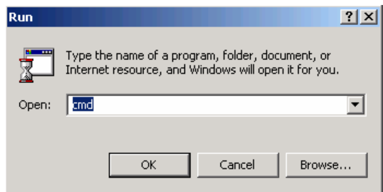
Appendix A

HOW TO ACCESS THE ROUTER CONFIGURATION SCREEN .

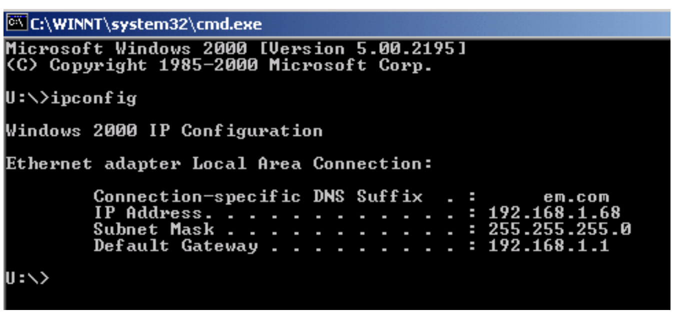
The Router configuration is the most important step in the process to view the cameras on the Internet. Most of the routers are similar on the access, graphics interface and configuration. The first step to access the router configuration screen it is to know the router IP address or “Gateway”. Usually the Web Browser is commonly used to access the router configuration.

If you don’t know what is your router IP address (gateway) do the following procedure:

- Press on **Start**
- Click on **RUN**
- Type **cmd** and click OK



DOS command prompt window



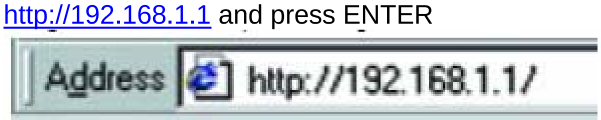
In the DOS window type **ipconfig** and press ENTER

The information from your DOS prompt will show you the information related to your network.
This information will be:

a- Your computer IP address.
b- Your Subnet mask
c- Your Default gateway.

This information includes the **<u>Default Gateway IP address</u>**. This is the information we need to access the **router menus.** Write down this information for later use.

Once you have the router IP address (gateway), open the Internet Explorer and type in the address bar http://192.168.1.1 and press ENTER



You will see the **LOGIN** screen. Enter the **user name** and **password** to access the Router menus and configuration. (if needed) .

Appendix B

SELECTING AND ASSIGNING AN IP ADDRESS FOR YOUR NETWORK DEVICE.

Selecting an IP address for your **network device** (DVR, Video server , PC) is important. With the IP address you will be able to communicate on the Network properly. To obtain an IP address for your **Network device** try the following options.

1. FROM THE IT ADMINISTRATOR.

1. FROM THE IT ADMINISTRATOR. Medium to large networks are administrated usually by an IT Administrator. In many cases is recommended to ask what IP address can be used on your **network device** (*) *(see page 5 for more information)*

2. THE "GUESSING " METHOD"

If it is difficult to get and IP address for the network , this method will help you to find an IP address easily for your **network device (*) .**

2.1. ADDING A NUMERIC VALUE. First at all, we have to get some information from a computer connected to the same network**.** See **Appendix A** to see how to get the information off the computer.

Examples.
If the computer connected on the same network has an IP address (example) as 192.168.1.**68** , try adding **5** numbers to the last octet (example , -> **68 + 5 = 73**) . The resulting number will be 192.168.1.**73 .**

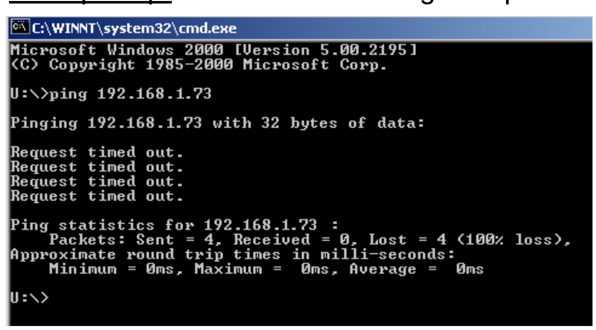
2.2 CHECKING THE IP ADDRESS . Once we have an IP address we want to try, we have to check if someone is using the IP address before we assign it to the Network device (*).

Go back to the computer at the <u>DOS prompt</u> windows according with procedure on **Appendix A**

On the DOS prompt
Type the following command :

ping 192.168.1.**73**

press **ENTER**



```
C:\WINNT\system32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

U:\>ping 192.168.1.73

Pinging 192.168.1.73 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.73 :
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  0ms, Average =  0ms

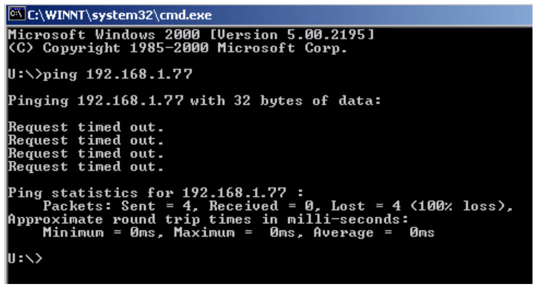
U:\>
```

If you receive a **"reply from"** that means somebody is already using this IP address on the network.

*(*) See page 5 for more details…*

Let's try to use another IP address adding another number to the last octet **(lets add 4 numbers, 73 + 4 = 77)** and try again**. Example** 192.168.1.77

Type :
ping 192.168.1.77
press ENTER



```
C:\WINNT\system32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

U:\>ping 192.168.1.77

Pinging 192.168.1.77 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.77 :
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  0ms, Average =  0ms

U:\>
```

If you get a **"request timed out"** , the message means nobody is using the IP address and this means you can use it on your **network device.**

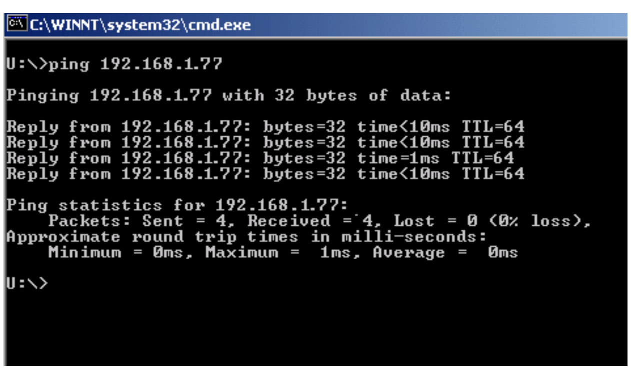
2.3. APPLYING THE SETTINGS. Once we selected the new **IP address** **192.168.1.77**, we will need to use the same ***subnet mask*** and the same ***default gateway*** from the computer. In addition to these values we need to make sure what port needs to be assigned to work properly according with the listed ports of your network device. (See page 7 for a complete list).

The final values (example) for the Network device will be:

EXAMPLE

IP address	192.	168.	1	77
Subnet mask	255	255	255	0
Default Gateway	192.	168	1	1

Once you assigned the **IP address** on your network device . Perform a **ping** command to the device according with the ping procedure, If you have a **reply** from your respective device **IP address** that indicates your the connection is working properly on the LAN.



```
C:\WINNT\system32\cmd.exe

U:\>ping 192.168.1.77

Pinging 192.168.1.77 with 32 bytes of data:

Reply from 192.168.1.77: bytes=32 time<10ms TTL=64
Reply from 192.168.1.77: bytes=32 time<10ms TTL=64
Reply from 192.168.1.77: bytes=32 time=1ms TTL=64
Reply from 192.168.1.77: bytes=32 time<10ms TTL=64

Ping statistics for 192.168.1.77:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  1ms, Average =  0ms

U:\>
```

TROUBLESHOOTING

PROBLEM	SOLUTION
I can't access the router configuration screen	• Check your cable connections • Check if you entered the correct router (**gateway) IP address** • Check if your computer has a Firewall blocking the IP address
I can access my router configuration screen but I don't have internet connection	• If you are using a DSL modem, check if you connection is down. Call your ISP to solve the problem.
I opened all the ports on the router and I can't still connect to my remote Network device (DVR, video server)	• Check your DSL modem, make sure your connection is UP. • Check the information on your network device has the correct information: ***IP address, subnet mask and default gateway*** according with the **Appendix A.** • Check if you opened the correct ports.(see page 7) • Check your cable connections. • Call your router manufacturer.
I installed the Network viewer program and entered the WAN IP address I still can't see my cameras	• Check if your computer is using a Firewall application like Norton Firewall. • Check if you configured the correct port to receive the data from your remote location. • If your network device support web browser, try using the IP address and port (if needed) to see the cameras. If you can watch the cameras on your Internet browser, the problem could relate to an Internal firewall application. • Check if your password is correct. • Check if your wan IP address is correct

It’s all on the web

Product Information

User Manuals

Quick Start Guides

Specification Sheets

Software Upgrades

Lorex Technology Inc.

Firmware Upgrades



www.lorexcctv.com